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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/757,181 | 01/14/2004 | Enrique Friesen | 34445 | 4184 |

7590 07/25/2005

HOVEY WILLIAMS LLP
Suite 400
2405 Grand
Kansas City, MO 64108

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| EXAMINER |
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BATSON, VICTOR D

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| ART UNIT | PAPER NUMBER |
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3671

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/757,181

Applicant(s)

FRIESEN, ENRIQUE

Examiner

Victor Batson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 36-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 14, 16, 17 and 19-35 is/are rejected.
- 7) ☒ Claim(s) 4-13, 15 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/14/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Election/Restrictions

Applicant's election of group I (claims 1-35) in the reply filed on 5/9/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3,14,16,17,19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenboom (6,718,892 B1).

Rosenboom discloses a seed meter 10 comprising a housing 20, a seed disk 40 and a seed eliminator 61. The examiner notes that since the seed eliminator is disclosed as a brush, depending on the seeds being planted, pressure differential and type of brush and bristles used, when the brush engages a seed to be dislodged, some of the bristles would be deflected which would be considered the seed eliminator deflected position. Concerning claim 14, the biasing mechanism is considered the bristles that do not directly touch the seeds.

Concerning claim 16, Rosenboom discloses a seed disk as described previously, but lacks specifying the thickness of the seed disk. It would have been obvious to one

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of ordinary skill in the art at the time the invention was made to form the disk of Rosenboom with a thickness in the range of not less than about 3/16" proximate the seed attachment holes, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (see MPEP 2144.05).

Concerning claim 17, It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the disk of Rosenboom such that it has a resistance to bending when a normal force is applied within the range of (greater than about 5 pounds), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (see MPEP 2144.05). (see rejection below regarding Hak (6,634,522)).

Claims 20-25,33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lundie et al. (4,600,122).

Lundie et al. discloses a seed disk for use in a seed housing, with the seed disk presenting a seed side and a vacuum side and with the seed disk further defining a plurality of seed attachment holes extending axially through the disk from the seed side to the vacuum side with the seed holes having a minimum diameter. Lundie et al. shows the seed holes having a minimum diameter spaced from the vacuum side, but lacks specifying that the minimum diameter is spaced from the vacuum side by at least about 1/8 ".

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the disk of Lundie et al. such that it has the seed holes minimum diameters spaced from the vacuum side by at least about 1/8", since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (see MPEP 2144.05).

Similarly, concerning claims 33 & 34, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the disk of Lundie et al. such that the distance between the seed disk and wall is not more than about 1/16" since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (see MPEP 2144.05).

Claims 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hak (6,634,522).

Hak discloses a seed disk for use in a seed housing, with the seed disk 10 defining a plurality of seed attachment holes configured to carry seeds. Hak further discloses the seed disk (considered to include disk 30) being formed of aluminum (col. 2). Although an aluminum disk configured to be used in a seed metering device and made of aluminum would inherently have a resistance to bending while being capable of deflecting if a large enough normal force were applied, Hak does not specify the size of the force required to cause a deflection of 1/8" when the disk is fixed at the disk axis

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and the force and deflection are applied and measured at a location 5" from the disk axis as claimed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the disk of Hak such that it has a resistance to bending when a normal force is applied within the range of (greater than about 5 pounds), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (see MPEP 2144.05).

Concerning claim 28, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the disk out of a material having the claimed modulus of elasticity and Brinell hardness rating since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Concerning claim 30, Hak discloses a seed disk as described previously, but lacks specifying the thickness of the seed disk. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the disk of Hak with a thickness in the range of not less than about 3/16" proximate the seed attachment holes, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (see MPEP 2144.05).

Allowable Subject Matter

Claims 4-13,15,18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The examiner notes that Sauder et al. (6,748,885) discloses minimizing variations in the vacuum around the circumference of the disk by manufacturing the disc from stainless steel and providing precise tolerances (col. 2).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor Batson whose telephone number is (571) 272-6987. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Will can be reached on (571) 272-6998. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

July 19, 2005



Victor Batson
Primary Examiner
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